Demands and Resources; Update on Surgical Training Requirements and Resources

Bryan T Carroll M.D. PhD.
Ian A. Maher M.D.
We have no relevant conflicts of interest

• We will be discussing some educational interventions that we helped develop
We will cover a fair number of resources

- You don’t need to take notes.
- We will send out a handout after the meeting!
Dermatology has a rich history of procedural innovation

• Mohs
• Local reconstruction
• Tumescent liposuction
• Botulinum toxin
• Fillers
• Acne surgery
• Chemical peels
Injectable cosmetics

Before

After
Mohs and reconstruction
This expanding knowledge has placed an educational burden on training programs.
What are the current state of requirements?

ACGME Program Requirements for Graduate Medical Education in Dermatology

ACGME approved focused revision: June 14, 2015; effective: July 1, 2016 Editorial revision: February 8, 2016
Medical Knowledge

IV.A.5.b).(4) must demonstrate knowledge of proper techniques for botulinum toxin injections, soft tissue augmentation, repairs of cutaneous surgical defects using flaps and grafts, and the use of light, laser, and other energy-based modalities for skin conditions;

(Outcome)

IV.A.5.b).(5) must demonstrate knowledge of indications and contraindications for, and complications and basic techniques of elective cosmetic dermatology procedures, to include chemical peels, dermabrasion, hair transplants, invasive vein therapies, liposuction, scar revision, and sclerotherapy; and,

(Outcome)

Residents must have didactic instruction for these topics, but neither performance of these procedures nor direct observation is required. (Detail)
“Other energy based”
Patient Care and Procedural Skills

Residents must be able to competently perform all medical, diagnostic, and surgical procedures considered essential for the area of practice.
The dreaded case log

<table>
<thead>
<tr>
<th>Categories</th>
<th>Asst/Obsrv</th>
<th>Primary Prov</th>
<th>Resident Surgeon</th>
<th>Total</th>
<th>Minimum</th>
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</thead>
<tbody>
<tr>
<td>Botulinum toxin chemodeinnervation</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Excision - benign or malignant</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>50</td>
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<tr>
<td>Flaps and grafts (split or full)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Laser - combined (ablative, non-ablative, vascular)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Mohs Micrographic Surgery</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Nail Procedures</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>3</td>
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<tr>
<td>Repair (closure) - simple/intermediate/complex</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Soft tissue augmentation/skin fillers</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

**Note:** The minimums for excision and repair are based on surgeon only, all other categories are based on the total of surgeon and observed/assist.
“Surgeon” requirements

• **Basic Principle**: To be recorded as the resident “surgeon” in the ACGME Resident Case Log System, a resident must be present for, and must participate in, **all** of the critical portions of the procedure being logged, under the supervision of an attending surgeon. Involvement in the pre-operative assessment, intra-operative planning, and the post-operative management of that patient is critical to that participation. The attending surgeon remains responsible for resident supervision and patient care.
“Competence” required

• Skin biopsy techniques
• Local and regional anesthesia
• Destruction of benign and malignant tumors,
• Excision of benign and malignant tumors
• Layered repair
Resources for attaining competence

• Clinical experience
• Hands on courses
  • ASDS
    • Cadaver and model based
  • AAD
    • Model based
• Regional courses
  • Mainly cadaver based
Cadaver courses are educationally powerful! But crushingly expensive.
Model based courses at meetings
Cheap, relatively high impact
Resources for assessing competence

Original Investigation

Objective Structured Assessment of Technical Skills in Elliptical Excision Repair of Senior Dermatology Residents: A Multirater, Blinded Study of Operating Room Video Recordings
# Objective Structured Assessment of Technical Skills in Elliptical Excision Repair of Senior Dermatology Residents

A Multirater, Blinded Study of Operating Room Video Recordings

<table>
<thead>
<tr>
<th>Task</th>
<th>Surgeon Trainees, No. (N = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection of appropriate instruments and suture</td>
<td>12</td>
</tr>
<tr>
<td>Correct placement of needle in holder</td>
<td>11</td>
</tr>
<tr>
<td>Correct insertion of needle into tissue &gt;80% of bites (ie, at 90°)</td>
<td>10</td>
</tr>
<tr>
<td>Equal bites on either side of wound</td>
<td>11</td>
</tr>
<tr>
<td>Correct entry and exit points for given needle</td>
<td>10</td>
</tr>
<tr>
<td>Distance between sutures</td>
<td>10</td>
</tr>
<tr>
<td>Curvature of needle followed</td>
<td>12</td>
</tr>
<tr>
<td>Smooth passage of needle, no hesitancy</td>
<td>11</td>
</tr>
<tr>
<td>Careful handling of skin edge with forceps</td>
<td>12</td>
</tr>
<tr>
<td>Dermis handled to cause eversion of edge</td>
<td>10</td>
</tr>
<tr>
<td>Adequate dermis bite</td>
<td>11</td>
</tr>
<tr>
<td>Square knot from first 2 throws</td>
<td>11</td>
</tr>
<tr>
<td>Adequate number of throws</td>
<td>11</td>
</tr>
<tr>
<td>Knot moved from suture line to cause eversion if necessary</td>
<td>11</td>
</tr>
<tr>
<td>Stitch perpendicular to wound edge</td>
<td>12</td>
</tr>
<tr>
<td>Eversion and apposition of wound edge</td>
<td>8</td>
</tr>
</tbody>
</table>
“Significant exposure” required. Direct observation or assistant in;

• Mohs
• Flaps and grafts
• Laser and energy sources
• Botulinum toxin
• Soft tissue procedural dermatology
Medical Knowledge
IV.A.3. Regularly scheduled didactic requirements

- There should be a well-organized course of instruction in the basic sciences related to medical dermatology, surgical and aesthetic dermatology, dermatopathology, and pediatric dermatology. (Core)

- Didactic sessions should include lectures, conferences, seminars, demonstrations, clinical education rounds, book and journal reviews, patient case reviews, and histologic slide review. (Core)

- Topics relating to cosmetic techniques, including liposuction, scar revision, laser resurfacing, hair transplants, and invasive vein therapies, must be included in didactic sessions. (Core)
Resources

• Durable E-resources
  • Online voice over PowerPoint curriculums
  • Video lectures for basic and advanced techniques
  • Online journal review and didactic aids

• Live
  • ASDS Visiting professor program
  • Dermatologic Surgery Journal Club Webinar
### Dermatologic Surgery Core Curriculum

Directed by Stuart J. Salasche, MD

<table>
<thead>
<tr>
<th>Lecturer</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>Stuart Salasche</td>
<td>Surgical Anatomy: Part I</td>
</tr>
<tr>
<td>Stuart Salasche</td>
<td>Surgical Anatomy: Part II</td>
</tr>
<tr>
<td>Robert Kirsner</td>
<td>Wound Healing</td>
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<tr>
<td>Jeffrey Dover</td>
<td>Laser Surgery Part I: Principles and Concepts</td>
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<tr>
<td>Roy Geronemus</td>
<td>Laser Surgery Part II: Vascular Lesions</td>
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<tr>
<td>Roy Grekin</td>
<td>Laser Surgery Part III: Hair Removal, Pigmented Lesions</td>
</tr>
<tr>
<td>Marc Avram</td>
<td>Introduction to Hair Replacement Therapy</td>
</tr>
<tr>
<td>Naomi Lawrence</td>
<td>Introduction to Liposuction and Tumescent Anesthesia</td>
</tr>
<tr>
<td>Gary Monheit</td>
<td>Introduction to Face Peels</td>
</tr>
<tr>
<td>Mitchel Goldman</td>
<td>Introduction to Sclerotherapy</td>
</tr>
<tr>
<td>Christopher Zachary</td>
<td>Laser Surgery Part IV: Resurfacing</td>
</tr>
</tbody>
</table>
Dermatologic Surgery Fundamentals

Lecture #15: Complications in Dermatologic Surgery

Franki Lambert Smith, MD; Mariah Ruth Brown, MD; and Adam M. Rotunda, MD
Dermatologic Surgery Fundamental Series

- Surgical Instruments and Sterilization
- Suture Properties and Wound Closure Materials
- Electrosurgery
- Wound Healing and Dressings
- Suturing
- Local Anesthetics
- Elliptical Excision
- Neurotoxins
- Laser and Light-Based Devices
- Sclerotherapy
- Complication in Dermatologic Surgery
- Grafts Part I: Full and SplitThickness Skin Grafts
- Grafts Part II: Other Grafts, Skin Substitutes and Second Intention Healing
- Mohs Micrographic Surgery
- Local Flaps and Interpolated Flaps
Procedural Dermatology Series

• Sutures Part I
• Sutures Part II
• Biopsy Tips and Tricks
• Excision
Excisions

Cyst Excision

Lipoma Excision
Welcome to Oculoplastics.info.

This site has aimed to provide surgical trainees with free access to a comprehensive video atlas of oculoplastic surgical techniques and tutorials since 2009. The original site featured Flash video but as iPads and iPhones and the mobile internet have become more and more prevalent the site has now been updated to feature a fully responsive design with HTML5 videos.

I hope you like the new design.
Dermatology

HEADS OF FACULTY

Stephen Katz
National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, USA

Georg Stingl
University of Vienna Medical School, Austria

SECTION HEADS

Murod Alam USA
Masayuki Amaqai Japan
Thomas Bieber Germany
Irwin Braverman USA
Leena Bruckner-Tuderman Germany
Lorenzo Ceroni Austria
Regina Förster-Holst Germany
Lars French Switzerland
Clive Grattan UK
Eckart Hanke Switzerland
Jon Hanifin USA
Rod Hay UK
Herbert Höönsmann Austria
Thomas Jansen Germany
Heidi H Kong USA
James Krueger USA
Philip LeBoit USA

David Lotfei USA
Henry Lim USA
Marcus Maurer Germany
Elise Olsen USA
Seth Orlov USA
Phoebe Rich USA
Martin Röcklein Germany
Jean-Hilaire Saurat Switzerland
Dirk Schäffers Germany
Sanja Schuller-Petrovic Austria
Neil Shear Canada
Robert Siddbury USA
Rodney Sinclair Australia
Antonella Tosti USA
Victoria Werth USA
Christos Zouboulis Germany
Cells to Surgery Quiz

The JID’s monthly Cells to Surgery Quiz features clinical images. It covers the contents of a new JID original article and discusses the latest surgical literature as it pertains to that article. This activity will help solidify the reader’s understanding of the information by linking events at the molecular, cellular, and clinical levels.

Current Quiz  2016  2015  2014

Cells to Surgery Quiz: October 2016
Ariel E. Eber, Robert J. Macone, John P. Tsatalis, Manna Perper, Adam S. Aidahan, Keyvan Nouri
Full-Text HTML  PDF  Supplemental Materials

Cells to Surgery Quiz: September 2016
Marina Perper, Christopher P. Emerson, Rachel A. Payne, Amr Molla, Adam S. Aidahan, John P. Tsatalis, Keyvan Nouri
Full-Text HTML  PDF  Supplemental Materials

Cells to Surgery Quiz: August 2016
John P. Tsatalis, Marina Perper, Adam S. Aidahan, Christopher P. Emerson, Amr Molla, Keyvan Nouri
Full-Text HTML  PDF  Supplemental Materials
Few Programs have an expert to provide hands on training for every technique

• Excisions
• Mohs
• Tumescent liposuction
• Botulinum toxin
• Fillers
• Acne surgery
• Chemical peels
Since most programs can offer only a subset of skills, what is available for increased exposure?

- Excisions
- Mohs
- Tumescent liposuction
- Botulinum toxin
- Fillers
- Acne surgery
- Chemical peels
Visiting Professor Program

Naomi Lawrence, MD (third from left), shares her knowledge of fillers and skin aging with University of Utah dermatology residents during her trip to Salt Lake City as part of the ASDS Visiting Professor Program.
## ASDS Visiting Professor Program

<table>
<thead>
<tr>
<th>NAME</th>
<th>LOCATION</th>
<th>COSMETIC</th>
<th>SILICONE</th>
<th>VEIN SURGERY / SCLEROTHERAPY</th>
<th>LASER SURGERY / RESURFACING</th>
<th>CHEMICAL PEELS</th>
<th>DERMABRASION</th>
<th>BLEPHAROPLASTY</th>
<th>TUMESCENT LOCAL ANESTHESIA</th>
<th>LIPOSUCTION / TUMESCENT LIPOSUCTION</th>
<th>EXCISIONAL SURGERY</th>
<th>MOHS SURGERY / MICROGRAPHIC</th>
<th>SURGICAL PRACTICE</th>
<th>RECONSTRUCTIVE SURGERY</th>
<th>SOCIOECONOMIC</th>
<th>FACELIFT</th>
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<tbody>
<tr>
<td>R. Rox Anderson, MD</td>
<td>Boston, MA</td>
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<td>Harold J. Brody, MD</td>
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<td>Mitchel P. Goldman, MD</td>
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<td>George J. Hruza, MD, MBA</td>
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<td>Jeffery A. Klein, MD, MPH</td>
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<td>Arisa Ortiz, MD</td>
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<td>Thomas Rohrer, MD</td>
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Dermatologic Surgery Journal Club Webinar

- Started in December 2012 by Murad Alam and Ian Maher.
- Frequently only a single derm surgeon/department
- Can lead to intellectual isolation vis a vis surgical topics
- Aim to provide high impact session reviewing best of previous month’s derm surgery relevant literature.
- 30-45 minute monthly webinar session
Sentinel Lymph Node Biopsy in Thin Cutaneous Melanoma: A Systematic Review and Meta-Analysis
Identifying and defining complications of dermatologic surgery to be tracked in the American College of Mohs Surgery (ACMS) Registry

M. Laurin Council, MD,\(^a\) Murad Alam, MD, MScI,\(^b\) Hugh M. Gloster, Jr, MD,\(^c\) Jeremy S. Bordeaux, MD, MPH,\(^d\) Bryan T. Carroll, MD, PhD,\(^e\) Justin J. Leitenberger, MD,\(^f\) Oliver J. Wisco, DO,\(^g\) and Ian A. Maher, MD\(^h\)

\(^a\)St Louis, Missouri; \(^b\)Chicago, Illinois; \(^c\)Cincinnati and Cleveland, Ohio; \(^d\)Norfolk, Virginia; \(^e\)and Portland and Bend, Oregon

May 24, 2016

Mariah Brown MD
University of Colorado
Is There a Role for Arnica and Bromelain in Prevention of Post-Procedure Ecchymosis or Edema? A Systematic Review of the Literature

Derek Ho, BS, * Jared Jagdeo, MD, MS, *†‡ and Heidi A. Waldorf, MD§

David R. Carr, MD FAAD FACMS
The Ohio State University
Division of Dermatology
“Competence” required

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- Local and regional anesthesia
- Destruction of benign and malignant tumors,
- Excision of benign and malignant tumors
- Layered repair

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• Visiting Professor Program
Thank you for your time and attention!
Any questions?